

REMARKS

In accordance with the foregoing, claim 15 has been cancelled and claims 1, 13 and 14 have been amended. Support for the changes to claims 1, 13 and 14 can be found, for example, in paragraphs 65, 66, and 93 through 96 of the application. Claims 1-14 are pending and under consideration.

The sole issue raised in the office action is the rejection of claims 1-13 under 35 U.S.C §102(e) as being anticipated by U.S. Patent No. 6,246,981 to Papineni et al.

Papineni et al. discloses a system for conversant interaction in which a recognizer receives and processes input information and outputs a recognized representation of the input information. A dialog manager is coupled to the recognizer. The dialog manager receives the recognized representation of the input information, and has task-oriented forms for associating user input information therewith. The dialog manager selects an applicable form from the task-oriented forms responsive to the input information by scoring the forms relative to each other. A synthesizer converts a response generated by the dialog manager to output the response. See claim 1.

Papineni et al. does not disclose a method for providing help information to a user in a speech dialogue system for operating a background application, the method comprising outputting a prompt corresponding to the state and context after detection of a global help command such that at least one transaction prompt is output in state a) and at least one help prompt is output in state b).

Spanning columns 13 and 14, Papineni et al. provide Appendix A: sample script segment. According to the method of Papineni et al., when help is requested, a help message is sent. For example, column 14, lines 30 through 40 provide the help message "purchase requires the name of the fund you want to buy and an amount." The method according to Papineni is known and referred to in the present application at page 3, paragraph [0018], state b).

According to the present invention, a prompt including the options corresponding to the state and context is output. Paragraph [0041] of the application provides a good comparison with the method described in Papineni et al. Whereas Papineni et al. informs the purchaser that the name of the fund is required, the present invention may list the funds available: "Say one of the following options: BASF, SIEMENS, Deutsche Bank, ...". Thus the claimed invention is

novel with regard to Papineni et al.

The claimed invention is also non-obvious. In typical speech dialogue systems, the user moves through a tree structure in a step-by-step fashion until the user has reached his required transaction or function. This procedure is very concise for a new user, but after a number of reiterations, it is also very time consuming and annoying, especially for a trained user.

To avoid the repeated moving through the tree structure, a dialogue machine "Diane" was developed. See German Patent Publication No. DE19615693 C1. With Diane, the transactions are no longer in a hierarchical arrangement in a tree structure, but are available simultaneously and co-equally according to a "flat earth" principle. After a precise analysis of a user's request, a transaction is chosen, and if included in the user's request, the parameter values required for the transaction are assumed. However, due to the equality of the transactions according to the "flat earth principle," a huge number of transactions can become available. This can make it difficult to identify the transaction desired by the user.

To address the problems, one potential goal of the present invention was to provide a help system, which supports the user operating a speech dialogue system by presenting him with the options available, and at the same time not overloading him with a huge amount of information. This problem is addressed by allowing a user to request context sensitive help at any state of the dialogue. For example, the user can state "what is possible" or "help," and the system will respond by outputting an overview of the valid possibilities available at that particular state.

The invention may achieve that goal by defining substates for a hierarchical structuring of the help function. In contrast to a tree structured system, where transactions and help functions are structured, with the present invention, the transactions may not be structured, but may be arranged co-equally according to the "flat earth" principle, independent from the help functions, which are structured.

Although the claims are not restricted to what is showed in the drawings, the figures graphically represent potential embodiments. Fig. 1 shows the co-equally arranged transactions T1 through T21 according to the flat earth principle. Figs. 2 through 4 show how the help function for these transactions is hierarchically structured by defining substates containing transactions or transactions and further substates.

With a hierarchical structure, the time required for help is shortened, and the advantages

of having a large number of transactions simultaneously and co-equally available are retained.

Papineni et al. does not mention or suggest the problems of the prior art nor does it mention or suggest any measures which could solve the problems. Accordingly, a person having ordinary skill the art, taking Papineni et al. into account, would not arrive at the claimed invention. Accordingly, claims 1, 13 and 14 patentably distinguish over the reference. Claims 2 to 12 depend directly or indirectly on independent claim 1 and contain all limitations of claim 1 and additional patentable limitations. Thus, claims 2 through 12 also patentably distinguish over Papineni et al., and the rejection should be withdrawn.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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Date: August 4 2005

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